

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
Information Center (STIC) no errors detected.**

Application Serial Number: 101576,919
Source: TEUSP
Date Processed by STIC: S-3-06

ENTERED



IFWP

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/576,919

DATE: 05/03/2006
TIME: 11:19:45

Input Set : A:\ITR0041P SEQLIST.TXT
Output Set: N:\CRF4\05032006\J576919.raw

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4 <110> APPLICANT: Ciliberto, Gennaro
5   De Francesco, Raffaele
6   Fattori, Daniela
7   Gallinari, Paola
8   Kinzel, Olaf D.
9   Koch, Uwe
10  Muraglia, Ester
11  Toniatti, Carlo
12  Cortese, Riccardo
13  Lahm, Armin
15 <120> TITLE OF INVENTION: ORTHOGONAL GENE SWITCHES
18 <130> FILE REFERENCE: ITR0041P
C--> 20 <140> CURRENT APPLICATION NUMBER: US/10/576,919
C--> 20 <141> CURRENT FILING DATE: 2006-04-24
20 <150> PRIOR APPLICATION NUMBER: PCT/EP2004/011683
21 <151> PRIOR FILING DATE: 2004-10-15
23 <150> PRIOR APPLICATION NUMBER: 60/514,362
24 <151> PRIOR FILING DATE: 2003-10-24
26 <160> NUMBER OF SEQ ID NOS: 62
28 <170> SOFTWARE: FastSEQ for Windows Version 4.0
30 <210> SEQ ID NO: 1
31 <211> LENGTH: 314
32 <212> TYPE: PRT
33 <213> ORGANISM: Human
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37 1           5           10          15
38 Ile Lys Arg Ser Lys Lys Asn Ser Leu Ala Leu Ser Leu Thr Ala Asp
39 20          25          30
40 Gln Met Val Ser Ala Leu Leu Asp Ala Glu Pro Pro Ile Leu Tyr Ser
41 35          40          45
42 Glu Tyr Asp Pro Thr Arg Pro Phe Ser Glu Ala Ser Met Met Gly Leu
43 50          55          60
44 Leu Thr Asn Leu Ala Asp Arg Glu Leu Val His Met Ile Asn Trp Ala
45 65          70          75          80
46 Lys Arg Val Pro Gly Phe Val Asp Leu Thr Leu His Asp Gln Val His
47 85          90          95
48 Leu Leu Glu Cys Ala Trp Leu Glu Ile Leu Met Ile Gly Leu Val Trp
49 100         105         110
50 Arg Ser Met Glu His Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu
51 115         120         125
52 Leu Asp Arg Asn Gln Gly Lys Cys Val Glu Gly Met Val Glu Ile Phe
53 130         135         140

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54 Asp Met Leu Leu Ala Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln
55 145 150 155 160
56 Gly Glu Glu Phe Val Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly
57 165 170 175
58 Val Tyr Thr Phe Leu Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp
59 180 185 190
60 His Ile His Arg Val Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu
61 195 200 205
62 Met Ala Lys Ala Gly Leu Thr Leu Gln Gln His Gln Arg Leu Ala
63 210 215 220
64 Gln Leu Leu Leu Ile Leu Ser His Ile Arg His Met Ser Asn Lys Gly
65 225 230 235 240
66 Met Glu His Leu Tyr Ser Met Lys Cys Lys Asn Val Val Pro Leu Tyr
67 245 250 255
68 Asp Leu Leu Leu Glu Met Leu Asp Ala His Arg Leu His Ala Pro Thr
69 260 265 270
70 Ser Arg Gly Gly Ala Ser Val Glu Glu Thr Asp Gln Ser His Leu Ala
71 275 280 285
72 Thr Ala Gly Ser Thr Ser Ser His Ser Leu Gln Lys Tyr Tyr Ile Thr
73 290 295 300
74 Gly Glu Ala Glu Gly Phe Pro Ala Thr Val
75 305 310
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79 <211> LENGTH: 314
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81 <213> ORGANISM: Artificial Sequence
83 <220> FEATURE:
84 <223> OTHER INFORMATION: human sequence with a point mutation
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88 1 5 10 15
89 Ile Lys Arg Ser Lys Lys Asn Ser Leu Ala Leu Ser Leu Thr Ala Asp
90 20 25 30
91 Gln Met Val Ser Ala Leu Leu Asp Ala Glu Pro Pro Ile Leu Tyr Ser
92 35 40 45
93 Glu Tyr Asp Pro Thr Arg Pro Phe Ser Glu Ala Ser Met Met Gly Leu
94 50 55 60
95 Leu Thr Asn Leu Ala Asp Arg Glu Leu Val His Met Ile Asn Trp Ala
96 65 70 75 80
97 Lys Arg Val Pro Gly Phe Val Asp Leu Thr Leu His Asp Gln Val His
98 85 90 95
99 Leu Leu Glu Cys Ala Trp Met Glu Ile Leu Met Ile Gly Leu Val Trp
100 100 105 110
101 Arg Ser Met Glu His Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu
102 115 120 125
103 Leu Asp Arg Asn Gln Gly Lys Cys Val Glu Gly Met Val Glu Ile Phe
104 130 135 140
105 Asp Met Leu Leu Ala Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln
106 145 150 155 160

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107 Gly Glu Glu Phe Val Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly
108 165 170 175
109 Val Tyr Thr Phe Leu Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp
110 180 185 190
111 His Ile His Arg Val Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu
112 195 200 205
113 Met Ala Lys Ala Gly Leu Thr Leu Gln Gln Gln His Gln Arg Leu Ala
114 210 215 220
115 Gln Leu Leu Leu Ile Leu Ser His Ile Arg His Met Ser Asn Lys Gly
116 225 230 235 240
117 Met Glu His Leu Tyr Ser Met Lys Cys Lys Asn Val Val Pro Leu Tyr
118 245 250 255
119 Asp Leu Leu Leu Glu Met Leu Asp Ala His Arg Leu His Ala Pro Thr
120 260 265 270
121 Ser Arg Gly Gly Ala Ser Val Glu Glu Thr Asp Gln Ser His Leu Ala
122 275 280 285
123 Thr Ala Gly Ser Thr Ser Ser His Ser Leu Gln Lys Tyr Tyr Ile Thr
124 290 295 300
125 Gly Glu Ala Glu Gly Phe Phe Ala Thr Val
126 305 310
129 <210> SEQ ID NO: 3
130 <211> LENGTH: 314
131 <212> TYPE: PRT
132 <213> ORGANISM: Artificial Sequence
134 <220> FEATURE:
135 <223> OTHER INFORMATION: human sequence with point mutations
137 <400> SEQUENCE: 3
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139 1 5 10 15
140 Ile Lys Arg Ser Lys Lys Asn Ser Leu Ala Leu Ser Leu Thr Ala Asp
141 20 25 30
142 Gln Met Val Ser Ala Leu Leu Asp Ala Glu Pro Pro Ile Leu Tyr Ser
143 35 40 45
144 Glu Tyr Asp Pro Thr Arg Pro Phe Ser Glu Ala Ser Met Met Gly Leu
145 50 55 60
146 Leu Thr Asn Leu Ala Asp Arg Glu Leu Val His Met Ile Asn Trp Ala
147 65 70 75 80
148 Lys Arg Val Pro Gly Phe Val Asp Leu Thr Leu His Asp Gln Val His
149 85 90 95
150 Leu Leu Glu Cys Ala Trp Met Glu Ile Leu Met Ile Gly Leu Val Trp
151 100 105 110
152 Arg Ser Met Glu His Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu
153 115 120 125
154 Leu Asp Arg Asn Gln Gly Lys Cys Val Glu Gly Val Glu Ile Phe
155 130 135 140
156 Asp Met Leu Leu Ala Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln
157 145 150 155 160
158 Gly Glu Glu Phe Val Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly
159 165 170 175

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160 Val Tyr Thr Phe Leu Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp
161 180 185 190
162 His Ile His Arg Val Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu
163 195 200 205
164 Met Ala Lys Ala Gly Leu Thr Leu Gln Gln Gln His Gln Arg Leu Ala
165 210 215 220
166 Gln Leu Leu Leu Ile Leu Ser His Ile Arg His Met Ser Asn Lys Gly
167 225 230 235 240
168 Met Glu His Leu Tyr Ser Met Lys Cys Lys Asn Val Val Pro Leu Tyr
169 245 250 255
170 Asp Leu Leu Leu Glu Met Leu Asp Ala His Arg Leu His Ala Pro Thr
171 260 265 270
172 Ser Arg Gly Gly Ala Ser Val Glu Glu Thr Asp Gln Ser His Leu Ala
173 275 280 285
174 Thr Ala Gly Ser Thr Ser Ser His Ser Leu Gln Lys Tyr Tyr Ile Thr
175 290 295 300
176 Gly Glu Ala Glu Gly Phe Pro Ala Thr Val
177 305 310
180 <210> SEQ ID NO: 4
181 <211> LENGTH: 314
182 <212> TYPE: PRT
183 <213> ORGANISM: Artificial Sequence
185 <220> FEATURE:
186 <223> OTHER INFORMATION: human sequence with point mutations
188 <400> SEQUENCE: 4
189 Ser Ala Gly Asp Met Arg Ala Ala Asn Leu Trp Pro Ser Pro Leu Met
190 1 5 10 15
191 Ile Lys Arg Ser Lys Lys Asn Ser Leu Ala Leu Ser Leu Thr Ala Asp
192 20 25 30
193 Gln Met Val Ser Ala Leu Leu Asp Ala Glu Pro Pro Ile Leu Tyr Ser
194 35 40 45
195 Glu Tyr Asp Pro Thr Arg Pro Phe Ser Glu Ala Ser Met Met Gly Leu
196 50 55 60
197 Leu Thr Asn Leu Ala Asp Arg Glu Leu Val His Met Ile Asn Trp Ala
198 65 70 75 80
199 Lys Arg Val Pro Gly Phe Val Asp Leu Thr Leu His Asp Gln Val His
200 85 90 95
201 Leu Leu Glu Cys Ala Trp Met Glu Ile Leu Met Ile Gly Leu Val Trp
202 100 105 110
203 Arg Ser Met Glu His Pro Gly Lys Leu Leu Trp Ala Pro Asn Leu Leu
204 115 120 125
205 Leu Asp Arg Asn Gln Gly Lys Cys Val Glu Gly Val Glu Ile Phe
206 130 135 140
207 Asp Met Leu Leu Ala Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln
208 145 150 155 160
209 Gly Glu Glu Phe Val Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly
210 165 170 175
211 Val Tyr Thr Phe Leu Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp
212 180 185 190

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Input Set : A:\ITR0041P SEQLIST.TXT
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213 His Ile His Arg Val Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu
214 195 200 205
215 Met Ala Lys Ala Gly Leu Thr Leu Gln Gln Gln His Gln Arg Leu Ala
216 210 215 220
217 Gln Leu Leu Leu Ile Leu Ser His Ile Arg His Met Ser Asn Lys Gly
218 225 230 235 240
219 Met Glu His Leu Tyr Ser Met Lys Cys Lys Asn Val Val Pro Leu Tyr
220 245 250 255
221 Asp Leu Leu Leu Glu Met Leu Asp Ala His Arg Leu His Ala Pro Thr
222 260 265 270
223 Ser Arg Gly Gly Ala Ser Val Glu Glu Thr Asp Gln Ser His Leu Ala
224 275 280 285
225 Thr Ala Gly Ser Thr Ser Ser His Ser Leu Gln Lys Tyr Tyr Ile Thr
226 290 295 300
227 Gly Glu Ala Glu Gly Phe Pro Ala Thr Val
228 305 310
231 <210> SEQ ID NO: 5
232 <211> LENGTH: 314
233 <212> TYPE: PRT
234 <213> ORGANISM: Artificial Sequence
236 <220> FEATURE:
237 <223> OTHER INFORMATION: human sequence with point mutations
239 <400> SEQUENCE: 5
240 Ser Ala Gly Asp Met Arg Ala Ala Asn Leu Trp Pro Ser Pro Leu Met
241 1 5 10 15
242 Ile Lys Arg Ser Lys Lys Asn Ser Leu Ala Leu Ser Leu Thr Ala Asp
243 20 25 30
244 Gln Met Val Ser Ala Leu Leu Asp Ala Glu Pro Pro Ile Leu Tyr Ser
245 35 40 45
246 Glu Tyr Asp Pro Thr Arg Pro Phe Ser Glu Ala Ser Met Met Gly Leu
247 50 55 60
248 Leu Thr Asn Leu Ala Asp Arg Glu Leu Val His Met Ile Asn Trp Ala
249 65 70 75 80
250 Lys Arg Val Pro Gly Phe Val Asp Leu Thr Leu His Asp Gln Val His
251 85 90 95
252 Leu Leu Glu Cys Ala Trp Met Glu Ile Leu Met Ile Gly Leu Val Trp
253 100 105 110
254 Arg Ser Met Glu His Pro Gly Lys Leu Leu Phe Ala Pro Asn Leu Leu
255 115 120 125
256 Leu Asp Arg Asn Gln Gly Lys Cys Val Glu Gly Val Glu Met Phe
257 130 135 140
258 Asp Met Leu Leu Ala Thr Ser Ser Arg Phe Arg Met Met Asn Leu Gln
259 145 150 155 160
260 Gly Glu Glu Phe Val Cys Leu Lys Ser Ile Ile Leu Leu Asn Ser Gly
261 165 170 175
262 Val Tyr Thr Phe Leu Ser Ser Thr Leu Lys Ser Leu Glu Glu Lys Asp
263 180 185 190
264 His Ile His Arg Val Leu Asp Lys Ile Thr Asp Thr Leu Ile His Leu
265 195 200 205

VERIFICATION SUMMARY
PATENT APPLICATION: US/10/576,919

DATE: 05/03/2006
TIME: 11:19:46

Input Set : A:\ITR0041P SEQLIST.TXT
Output Set: N:\CRF4\05032006\J576919.raw

L:20 M:270 C: Current Application Number differs, Replaced Current Application No
L:20 M:271 C: Current Filing Date differs, Replaced Current Filing Date